



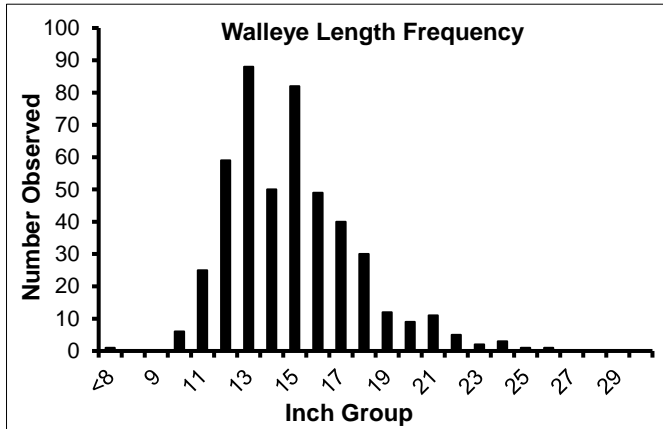
WISCONSIN DNR FISHERIES INFORMATION SHEET

LAKE: Lily Lake

COUNTY: Forest

YEAR: 2016-17

The Wisconsin Department of Natural Resources conducted a two-year (2016-17) comprehensive survey of Lily Lake, Forest County, to analyze the health of its fishery. Lily Lake is located approximately 10 miles south of Crandon, with boat access off of Lily Lake Road. Lily Lake covers 211 acres and achieves a maximum depth of 25 feet.



* Note: Adult walleye are defined as all sexually mature fish and all fish of unknown sex ≥ 15 inches long.

Walleye



A mark-recapture survey was conducted to estimate the abundance of adult walleye in Lily Lake. Over a four day period in April of 2017, a total of 465 different adult walleye were captured during fyke net and electrofishing surveys. Based on our survey data we estimate the adult walleye population in Lily Lake to be approximately 1,111 fish (5.3/acre). At over five adults per acre this population is considered to be of high abundance.

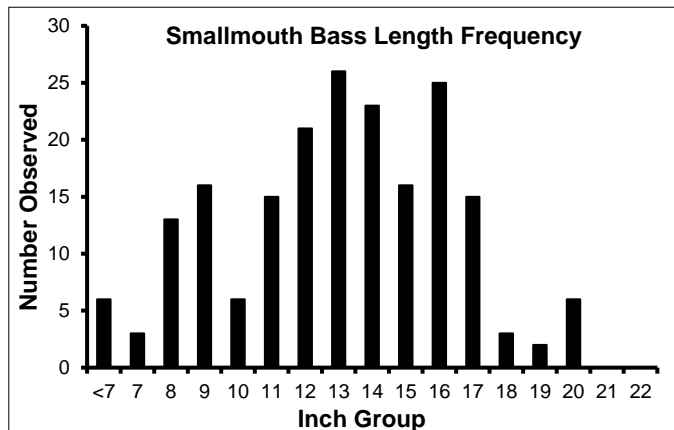
Every walleye captured during our spring survey was measured to assess the size structure of the population, a total of 474 fish. Size structure of walleye in Lily Lake is considered moderate with approximately 52% of the population being ≥ 15 inches and 7% ≥ 20 inches. The largest walleye captured during the walleye portion of our survey was 26.4 inches, however, walleye were captured up to 28.1 inches during the muskellunge assessment in 2017.

Smallmouth Bass

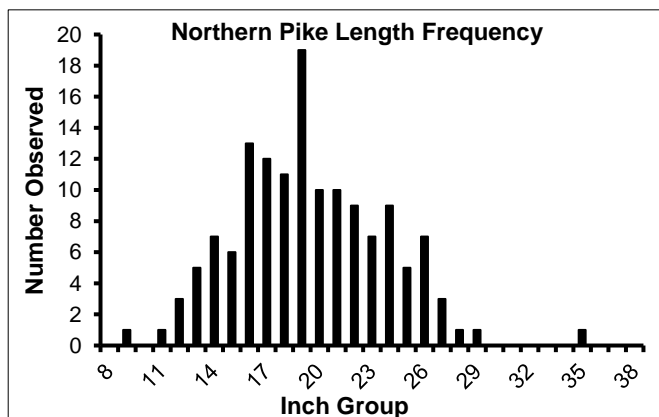


The smallmouth bass population was assessed during the 2016 portion of our survey. Smallmouth bass were captured during our spring fyke net survey and 4 spring electrofishing surveys from 5/2 to 5/18/2016. During these surveys a total of 143 different smallmouth bass were given an identifiable fin clip. These fish were allowed to mix back into the population before we conducted our "recapture" surveys on 5/25 and 6/1/2016. During the recapture survey a total of 70 different smallmouth bass were captured, with 26 fish bearing the fin clip given during the "marking" survey. The data obtained from our bass surveys estimate the smallmouth bass population (≥ 8 inches) to be approximately 398 fish. At approximately 1.9 adults/acre this is considered a moderate abundance of smallmouth bass.

A total of 196 different smallmouth bass were captured and measured to assess the size structure of the population. The size structure of smallmouth bass in Lily Lake is very good with approximately 47.4% of the smallmouth bass captured being ≥ 14 inches and 3.2% ≥ 20 inches.



* Note: Adult bass are defined as all bass ≥ 8 inches long.



* Note: Adult northern pike are defined as all sexually mature fish and fish of unknown sex ≥ 12 inches long.

Northern Pike



Like walleye, adult northern pike were captured and marked with an identifiable fin clip during early spring surveys in 2017. A second sample of northern pike was captured during the muskellunge netting survey in 2017 to estimate the size of the adult (≥ 12 inches) population in Lily Lake. The data collected this year estimates the adult population to be approximately 415 fish (2.0/acre), a low-to-moderate abundance of northern pike.

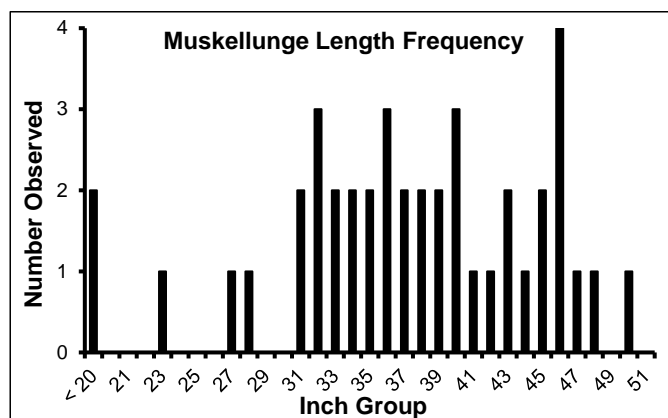
Every Northern Pike captured during the 2017 survey was measured to assess size structure. The size structure of the northern pike population is considered poor, with approximately 40.5% ≥ 21 inches, and 2.3% ≥ 28 inches in length. The largest northern pike captured during our survey was 35.6 inches long.

Muskellunge

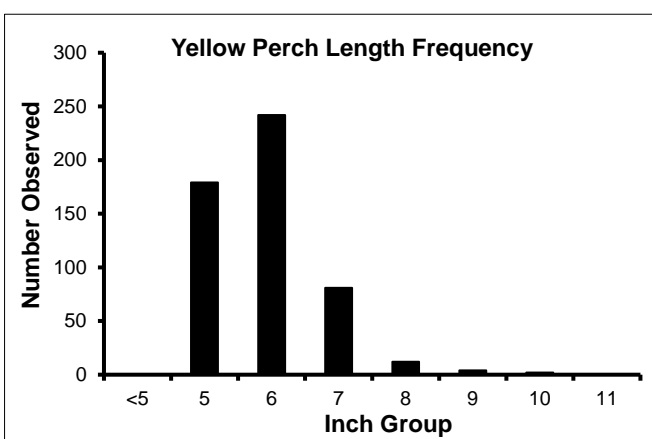


It is a two year process to estimate the abundance of muskellunge in a given waterbody. During 2016 a total of 21 different muskellunge were captured and marked with an identifiable fin clip and internal tag. A second sample of 29 muskellunge was captured during 2017. A total of 8 fish captured during 2017 bore the mark given during the 2016 surveys. These data produce an estimate of the adult (≥ 30 inches) population to be approximately 62 fish (0.29/acre), which is considered a moderate density of muskellunge.

Every individual muskellunge (42 fish) was measured and the length at initial capture was used to assess the size structure of the population. After excluding the fish captured < 20 inches, 42.5% of the muskellunge captured were ≥ 40 inches, and 22.5% were ≥ 45 inches, with the largest fish sampled being 50.0 inches long. The size structure of the Lily Lake muskellunge population is well above average.



* Note: Adult muskellunge are defined as all fish ≥ 30 inches long.



Yellow Perch



During the early spring netting survey in 2017 yellow perch were captured at a rate of approximately 4.0 fish per net-lift. Yellow perch abundance was higher during the muskellunge netting surveys, with the highest abundance occurring in the spring of 2016, where yellow perch abundance was approximately 12.4 fish per net-lift. While yellow perch abundance is below the average for this region of Wisconsin, the Lily Lake population appears to be strong, and yellow perch are the most abundant panfish species in Lily Lake.

A random sample of 520 yellow perch were measured during 2017 to assess the size structure of the population. The Lily Lake population has poor-to-moderate size structure with approximately 19.0% and 3.5% of the yellow perch being ≥ 7 and 8 inches respectively.

Bluegill

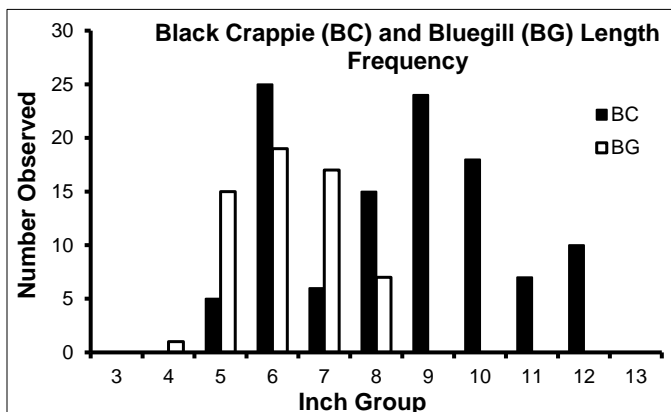


and Black Crappie



The bluegill population was assessed during a late spring netting survey in 2016. During this survey bluegill abundance was measured at 6.3 fish per net-night, a very low abundance of bluegill. Typical of low density bluegill populations, the size structure of the population is good with 40.7% of the fish being ≥ 7 inches in length.

There were three different surveys conducted over the timeframe of this survey that can be used to assess black crappie. During spring netting for muskellunge, crappie abundance was measured at 0.3 and 1.0 fish per net-night, in 2016 and 2017 respectively. During early spring netting in 2017 no crappie were captured. These catch rates suggest that black crappie are of very low abundance in Lily Lake. The size structure of the population is above average with 31.8% of the fish captured being ≥ 10 inches in length.



Other Species

The species listed above were the focus of the 2016-17 survey, with surveys designed to best sample these individual species. Other species captured during our survey efforts include; largemouth bass, pumpkinseed, rock bass, yellow bullhead, black bullhead, white sucker, common shiner, and rainbow darter. Based on catch rates and observations during this two year survey, rock bass should be considered abundant, white sucker are common, bullhead are present, and all other species are considered rare. At this time, no changes are recommended for public access, fishing regulations or aquatic plant management.

This report is interim only; data and findings should not be considered final.
For answers to questions about fisheries management activities and plans for Lily Lake contact:

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